LISTING OF CLAIMS

1. (Original) A method using electric fields to reduce the body's rejection response to materials, devices or systems placed in part or in whole subdermally consisting of:

a. one or more first electrodes subdermally located in the close proximity of a critical structure or feature of a device introduced into the body;

b. one or more second electrodes located elsewhere;

c. and the passage of an electrical current through tissue between the first set of electrodes to the second set of electrodes for the purpose of minimizing encapsulation in the area of the critical structure or features of the device.

2. (Original) The method of claim 1 wherein the electrical current is substantially DC in nature.

3. (Original) The method of claim 1 wherein the electrical current is substantially pulsatile in nature.

4. (Original) The method of claim 1 wherein the current density of one or more first electrodes is generally between 0.01 mA/cm^2 and 100 mA/cm^2.

5. (Original) The method of claim 1 wherein the method includes the use of a semipermeable structure to separate one or more first electrodes from surrounding tissue.

6. (Original) The method of claim 1 wherein the method includes the use of a semipermeable structure to separate one or more second electrodes from surrounding tissue.

7. (Original) A method using electric fields to reduce the body's rejection response to materials, devices or systems placed in part or in whole subdermally consisting of:

a. one or more first electrodes subdermally located in the close proximity of a critical structure or feature of a device introduced into the body;

b. one or more second electrodes located elsewhere;

c. and the passage of a pulsatile electrical current through tissue between the first set of electrodes to the second set of electrodes for the purpose of minimizing encapsulation in the area of the critical structure or features of the device.

8. (Original) The method of claim 7 wherein the current density of one or more first electrodes is generally between 0.01 mA/cm^2 and 100 mA/cm^2.

9. (Original) The method of claim 7 wherein the method includes the use of a semipermeable structure to separate one or more first electrodes from surrounding tissue.

10. (Original) The method of claim 7 wherein the method includes the use of a semipermeable structure to separate one or more second electrodes from surrounding tissue.

11. (Original) An apparatus for the delivery of electric fields to reduce the body's rejection response to devices placed in part or in whole subdermally having:

a. one or more first electrodes subdermally located in the close proximity of a critical structure or feature of a device introduced into the body;

b. one or more second electrodes located elsewhere;

c. control circuitry and power supply to provide for the passage of an electrical current through tissue between the first set of electrodes to the second set of electrodes for the purpose of minimizing encapsulation in the area of the critical structure or features of the device.

12. (Original) The apparatus of claim 11 wherein one or more first electrodes is affixed to the device.

13. (Original) The apparatus of claim 11 wherein one or more second electrodes is affixed to the device.

14. (Original) The apparatus of claim 11 wherein one or more first electrodes is not affixed to the device.

15. (Original) The apparatus of claim 11 wherein one or more second electrodes is not affixed to the device.

16. (Original) The apparatus of claim 11 wherein the device is percutaneous in nature.

17. (Original) The apparatus of claim 11 wherein the device is fully implanted.

18. (Original) The apparatus of claim 11 wherein one or more first electrodes is separated from tissue by a semipermeable structure.

19. (Original) The apparatus of claim 11 wherein the device is used for the purpose of therapeutic agent delivery.

20. (Original) The apparatus of claim 11 wherein the device is used for the purpose of sampling of biofluids for analytes.

21. (New) A medical device comprising a first medical device portion comprising a first tissue contacting surface that is configured to undergo a time dependent variation in surface charge at a site of contact with a host, in response to a time dependent signal.

22. (New) The medical device of Claim 21, wherein said variation in surface charge guides the migration of selected cell types.

23. (New) The medical device of Claim 22, wherein said variation in surface charge guides endothelial cells.

24. (New) The medical device of Claim 22, wherein said variation in surface charge guides fibroblasts.

25. (New) The medical device of Claim 21, wherein said medical device is configured for subdermal implantation

26. (New) The medical device of Claim 25, wherein said medical device is configured for implantation in a vascular structure.

27. (New) The therapeutic system of Claim 21, wherein said time dependent signal produces a current density through host tissue or body fluids of between 0.01 and 100 mA/cm^2.

28. (New) A medical device comprising a first medical device portion comprising a first electrode contacting host tissue that is configured to undergo a time dependent variation in potential relative to a second electrode contacting host tissue in response to a time dependent signal, wherein said time dependent variation in potential produces current sufficient to guide cell migration in the vicinity of said electrodes.

29. (New) The medical device of Claim 28, wherein said variation in potential guides the migration of selected cell types.

30. (New) The medical device of Claim 29, wherein said variation in potential guides endothelial cells.

31. (New) The medical device of Claim 29, wherein said variation in potential guides fibroblasts.

32. (New) The medical device of Claim 28, wherein said medical device is configured for subdermal implantation

33. (New) The medical device of Claim 32, wherein said medical device is configured for implantation in a vascular structure.

34. (New) The therapeutic system of Claim 28, wherein said potential produces a current density through host tissue or body fluids of between 0.01 and 100 mA/cm^2.

35. (New) A therapeutic system, at least part of which is configured for subdermal implantation in a subject, said system comprising:

a device configured for subdermal implantation;

one or more first electrodes associated with said device and configured for subdermal implantation with said device;

one or more second electrodes in contact with said subject and positioned for electrical communication with said one or more first electrodes;

at least one power source connected to said first and second electrodes, wherein said electrodes are positioned and said power supply is configured to apply electrical signals to said electrodes such that cellular migration proximate to said device is affected.

36. (New) The therapeutic system of Claim 35, wherein said power source and electrode position produces a current density between electrodes of between 0.01 and 100 mA/cm^2.